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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/516,327	03/01/00	PREVEY	LRI-004PAT

MM92/0425

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EXAMINER MARTIN, L

ART UNIT 2855	PAPER NUMBER
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DATE MAILED: 04/25/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/516,327

Applicant(s)

PREVEY, PAUL S

Examiner

Lilybett Martir

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

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DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: In page 13, line 15, D(x) is defined as the "density of burnishing", while in line 20 it is described as the "spacing density", also, the specification omits the description of element 138.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In Claims 1 and 9, the language utilized doesn't clearly indicate how the method disclosed reduces the tensile stress in the surface of a part.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11 are rejected under 35 U.S.C. 102(b) as anticipated by Prevey,III (Pat. 5,826,453). Prevey teaches the claimed method including:

- Selecting a region (Claim 1) of the part to be treated (Col. 8, line 55) and exerting pressure against the surface of the selected region (Col. 2, line 62), the pressure being applied such that the magnitude of compression decreases in the direction towards the boundaries of the selected region, as inherently disclosed in Col. 8, lines 57-59.
- Exerting the pressure (Claim 2) against the surface of the part by a burnishing operation (Col. 8, line 57).
- A burnishing operation (Claims 3 and 10) that induces a deep layer of compression within the surface having associated cold working of less than about 5.0 percent as inherently disclosed in Col. 8, lines 57-60.
- Exerting the pressure on the surface (Claims 4 and 11) by inducing a deep layer of compression within the surface having associated cold working of less than about 3.5 percent (Col. 8, line 60).

- Comprising the step of selecting the magnitude of compression by programming a control unit (Claim 5) to automatically reduce the magnitude of compression (Col. 3, lines 37-40) in the direction towards the boundaries of the selected region.
- Comprising in the step of exerting pressure against the surface of the selected region the step of programming a control unit (Claim 6) to control the application of the pressure (Col. 3, lines 33-35).
- A burnishing operation (Claim 7) that includes varying the burnishing density along the boundaries along the boundaries of the selected region (Col. 2, lines 57-60).
- The part (Claim 8) is selected from the group consisting of automotive parts, aircraft parts, marine parts, engine parts, motor parts, machine parts, drilling parts, construction parts and pump parts (Col. 4, line 4).
- Selecting a region (Claim 9) of the part to be treated (Col. 8, line 55) and programming a control unit of a burnishing apparatus to perform a burnishing operation (Col. 3, lines 4-8), the burnishing operation being performed such that the density of burnishing and the magnitude of compression are varied to reduce the high tensile stress along the boundaries of the selected region (Col. 2, lines 57-60).

Claim 1 discloses a pressure applied such that the magnitude of compression decreases in the direction toward the boundaries of the selected region, inherently disclosed in Col. 8, lines 57-59, since a zone of deformation is formed by compressions

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of different magnitudes that are exerted over a surface in a selected pattern. Claims 3 and 10 include a variation in the range of cold working to modify the layer retention of residual stress to improve fatigue and stress corrosion performance of workpieces that is inherently disclosed in Col. 8, lines 57-60.

Citation of Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art considered pertinent during examination of the examined application is:

- Linzell (Pat. 5,643,055) discloses a way to shape a metal workpiece by rubbing contact over a surface that is continuous.
- Beckman et al. (Pat. 4,360,143) discloses a method for manufacturing suspension members by pre-testing and subjecting said members to maximum forces resulting in cold working.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (703)305-6900. The examiner can normally be reached on 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Fuller can be reached on (703)308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3432 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



Lilybett Martir
Examiner
Art Unit 2855

lm
April 19, 2001

